

Project Information

For: Herring Residence
SW Magnolia Lane, Ft. White, FL 32038

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	33	93	Method	Average
Inside db (°F)	70	75	Construction quality	
Design TD (°F)	37	18	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	32	46		

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 4TWR5030G1
AHRI ref 7489897

Efficiency 8.5 HSPF

Heating input
Heating output 29800 Btuh @ 47°F
Temperature rise 0 °F
Actual air flow 0 cfm
Air flow factor 0 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 30 °F

COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 4TWR5030G1
Coil TMM5A0B30M21SAA
AHRI ref 7489897

Efficiency 12.5 EER, 15 SEER

Sensible cooling 21000 Btuh
Latent cooling 9000 Btuh
Total cooling 30000 Btuh
Actual air flow 1000 cfm
Air flow factor 0.043 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.86

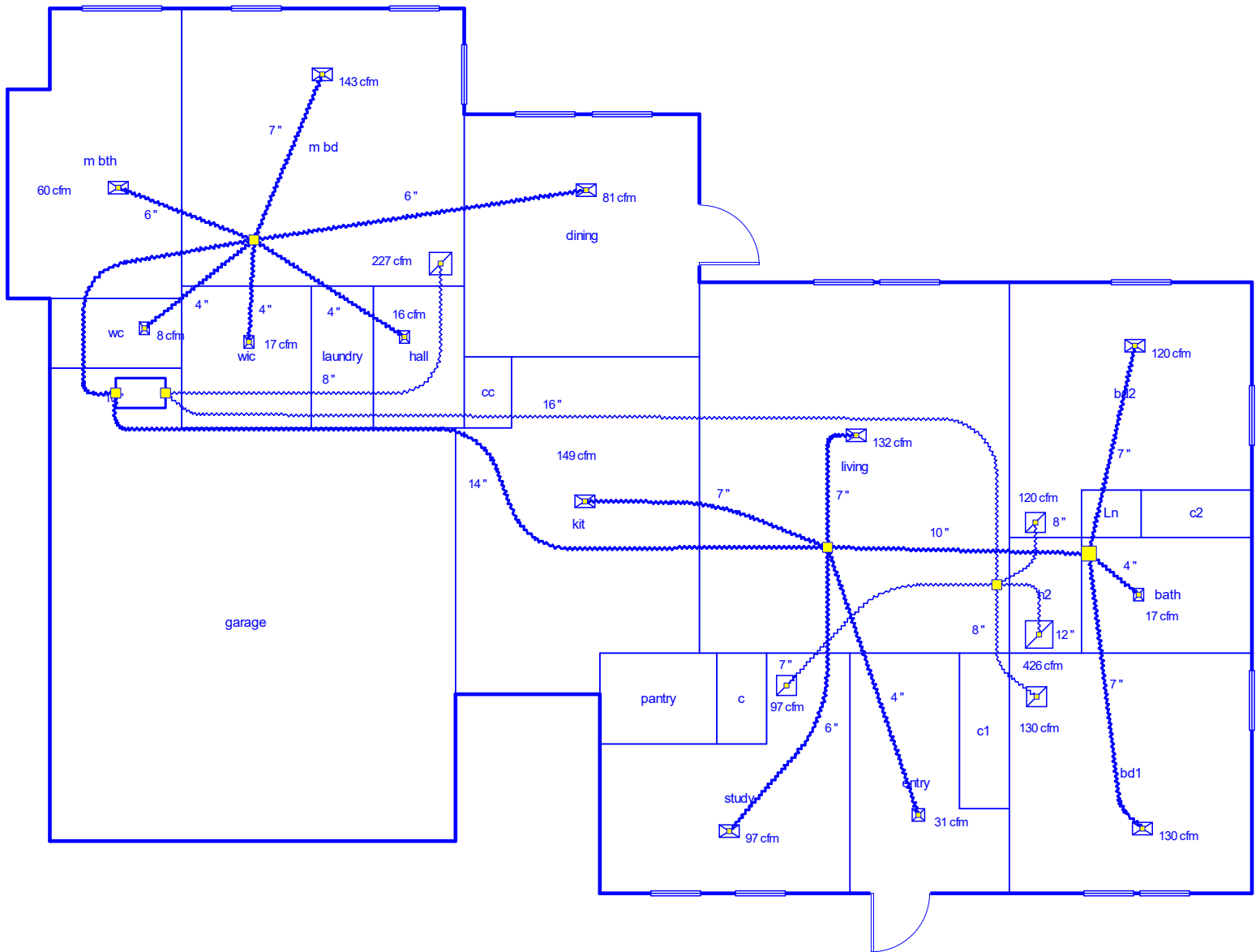
ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
wc	24	406	177	0	8
wic	46	60	395	0	17
laundry	22	0	0	0	0
hall	33	48	373	0	16
cc	8	0	0	0	0
m bd	198	3052	3355	0	143
dining	144	3086	1904	0	81
m bth	119	3086	1405	0	60
kit	187	1150	3511	0	149
living	290	2720	3106	0	132
pantry	27	0	0	0	0
c	11	0	0	0	0
study	113	2917	2287	0	97
entry	77	1208	736	0	31

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

c1	20	0	0	0	0
bd1	147	3522	3050	0	130
bath	50	832	392	0	17
h2	21	0	0	0	0
c2	13	0	0	0	0
Ln	7	0	0	0	0
bd2	136	3229	2822	0	120
Entire House	1693	25315	23511	0	1000
Other equip loads		0	0		
Equip. @ 1.00 RSM			23511		
Latent cooling			3830		
TOTALS	1693	25315	27341	0	1000

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.







Manual S Compliance Report

Entire House

G.Buzbee

Job:
Date: Jan 08, 2021
By: Donna Brackeen

Project Information

For: Herring Residence
SW Magnolia Lane, Ft. White, FL 32038

Cooling Equipment

Design Conditions

Outdoor design DB:	93.4°F	Sensible gain:	23511	Btuh	Entering coil DB:	77.3°F
Outdoor design WB:	76.4°F	Latent gain:	3830	Btuh	Entering coil WB:	63.6°F
Indoor design DB:	75.0°F	Total gain:	27341	Btuh		
Indoor RH:	50%	Estimated airflow:	1000	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	4TWR5030G1+TMM5A0B30M21SAA
Actual airflow:	1000	cfm	
Sensible capacity:	21000	Btuh	89% of load
Latent capacity:	9000	Btuh	235% of load
Total capacity:	30000	Btuh	110% of load SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	33.4°F	Heat loss:	25315	Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	4TWR5030G1+TMM5A0B30M21SAA
Actual airflow:	0	cfm	
Output capacity:	29800	Btuh	118% of load
Supplemental heat required:	0	Btuh	
Capacity balance:	30	°F	
Economic balance:	-99	°F	

Meets all requirements of ACCA Manual S.





Duct System Summary

Entire House

G.Buzbee

Job:
Date: Jan 08, 2021
By: Donna Brackeen

Project Information

For: Herring Residence
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	Heating	Cooling
External static pressure	0.50 in H ₂ O	0.50 in H ₂ O
Pressure losses	0.18 in H ₂ O	0.18 in H ₂ O
Available static pressure	0.32 in H ₂ O	0.32 in H ₂ O
Supply / return available pressure	0.195 / 0.125 in H ₂ O	0.195 / 0.125 in H ₂ O
Lowest friction rate	0.098 in/100ft	0.098 in/100ft
Actual air flow	0 cfm	1000 cfm
Total effective length (TEL)	328 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
bath	c 392	0	17	0.106	4.0	0x0	VIFx	58.2	125.0	st3
bd1	c 3050	0	130	0.098	7.0	0x0	VIFx	69.3	130.0	st3
bd2	c 2822	0	120	0.102	7.0	0x0	VIFx	65.6	125.0	st3
dining	c 1904	0	81	0.146	6.0	0x0	VIFx	33.4	100.0	st1
entry	c 736	0	31	0.121	4.0	0x0	VIFx	56.0	105.0	st2
hall	c 373	0	16	0.155	4.0	0x0	VIFx	25.6	100.0	st1
kit	c 3511	0	149	0.118	7.0	0x0	VIFx	54.4	110.0	st2
living	c 3106	0	132	0.123	7.0	0x0	VIFx	48.8	110.0	st2
m bd	c 3355	0	143	0.155	7.0	0x0	VIFx	25.6	100.0	st1
m bth	c 1405	0	60	0.157	6.0	0x0	VIFx	23.9	100.0	st1
study	c 2287	0	97	0.116	6.0	0x0	VIFx	57.9	110.0	st2
wc	c 177	0	8	0.158	4.0	0x0	VIFx	23.6	100.0	st1
wic	c 395	0	17	0.160	4.0	0x0	VIFx	21.7	100.0	st1

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	0	324	0.146	593	10.0	0 x 0	VinIFlx	st2
st3	Peak AVF	0	266	0.098	488	10.0	0 x 0	VinIFlx	
st2	Peak AVF	0	676	0.098	633	14.0	0 x 0	VinIFlx	



Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb2	0x 0	0	97	128.2	0.098	364	7.0	0x 0		VIFx	rt1
rb4	0x 0	0	120	119.7	0.105	344	8.0	0x 0		VIFx	rt1
rb1	0x 0	0	426	120.1	0.104	543	12.0	0x 0		VIFx	rt1
rb3	0x 0	0	130	122.1	0.103	372	8.0	0x 0		VIFx	rt1
rb5	0x 0	0	227	55.3	0.226	650	8.0	0x 0		VIFx	

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt1	Peak AVF	0	773	0.098	554	16.0	0 x 0	VinIFlx	